CLAIMS

1	1. A method for concealing errors detected in an input audio bit stream, the digital
2	audio bit stream configured as a series of packets, said method comprising the steps
3	of:
4	detecting a first beat and a subsequent plurality of beats in the audio bit stream;
5	defining a first inter-beat interval extending between said first beat and a (k+1) th
6	subsequent beat;
7	storing at least a portion of the audio bit stream occurring within said first inter-
8	beat interval;
9	detecting an erroneous audio segment occurring in a second inter-beat interval
10	extending between said (k+1) th beat and a (2k+1) th subsequent beat; and
11	replacing at least a first part of said erroneous audio segment with a
12	corresponding part of said stored digital audio bit stream portion.
1	2. A method as in claim 1 wherein 'k' is an integer greater than or equal to 2.
1	3. A method as in claim 1 wherein said stored audio bit stream portion includes
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2	at least one packet positioned on at least one said beat.

- 1 4. A method as in claim 1 wherein said step of detecting a first beat comprises a
- 2 step of computing the variance of the audio bit stream using decoded IMDCT
- 3 coefficients.
- 1 5. A method as in claim 1 wherein said step of detecting a first beat comprises
- 2 the step of utilizing a window-switching pattern.

- 1 6. A method as in claim 1 wherein said step of detecting a first beat comprises a
- 2 step of computing the envelope of the audio bit stream using decoded IMDCT
- 3 coefficients.
- 1 7. A method as in claim 1 wherein said step of detecting a first beat comprises
- 2 the steps of computing the variance of the audio bit stream using decoded IMDCT
- 3 coefficients and utilizing a window-switching pattern.
- 1 8. A method as in claim 1 wherein said step of storing at least a portion of the
- 2 audio bit stream includes a step of storing said portion in a circular first-in first-out
- 3 (FIFO) buffer.
- 1 9. A method for error concealment in a process of digital audio streaming, said
- 2 method comprising the steps of:
- 3 providing a bitstream;
- 4 detecting at least two beats extracted from said bitstream, said beats extracted
- from a signal having repetitive sequences; and
- determining an inter-beat interval between said at least two beats.
- 1 10. A method as in claim 9 wherein said signal having repetitive sequences
- 2 comprises at least one signal from the group consisting of a music signal and an audio
- 3 signal.
- 1 11. A method as in claim 9 wherein said signal having repetitive sequences
- 2 includes an error pattern.
- 1 12. A method as in claim 9 wherein said signal having repetitive sequences
- 2 includes a packet loss from an IP network and a burst error from a wireless channel.

- 1 13. A method as in claim 9 further comprising the step of decoding at least a
- 2 portion of said signal having repetitive sequences.
- 1 14. A method as in claim 9 wherein said signal having repetitive sequences
- 2 comprises at least one element from the group consisting of a rhythm element, a beat
- 3 element, and a bar element.
- 1 15. A method as in claim 11 further comprising the step of replacing said error
- 2 pattern with music content.
- 1 16. A method as in claim 9 further comprising the step of replacing one said beat
- with another said beat from a preceding bar.
- 1 17. A method for error concealment in a process of digital audio streaming in a
- 2 wireless terminal, said method comprising the step of storing two consecutive inter-
- 3 beat intervals of the compressed audio bitstream
- 1 18. A memory for error concealment in a process of digital audio streaming in a
- 2 wireless terminal, said memory comprising:
- 3 storing means for storing a signal history of musical beats of two consecutive
- 4 inter-beat intervals of the compressed audio bitstream.